

A METHOD AND APPARATUS FOR TIMING RECOVERY IN A COMMUNICATION DEVICE

Abstract of the Disclosure

5 A receiving communication device synchronizes to a timing reference of a transmitting communication device based on a determined timing error. The receiving communication device determines the timing error by processing a synchronization signal via a first stage filtering and interpolation process that includes predetermined coefficients and a second stage interpolation process that includes a minimal number of dynamically
10 determined coefficients. By dividing the process into a predetermined coefficient stage and a dynamically determined coefficient stage, the receiving communication device is able to make timing adjustments in a more efficient manner, that is, at a lesser processor loading, than a communication device in which all filtering and interpolation coefficients are dynamically determined. In addition, by including a second order timing recovery
15 loop, the receiving communication device is able to quickly and precisely respond to drifting of a timing reference differential between itself and the transmitting communication device.